



July 17, 2015

Reference No. 002428

Mr. Gregory P. Sutton, P.E.  
New York State Department of  
Environmental Conservation Region 9  
Division of Environmental Remediation  
270 Michigan Avenue  
Buffalo, New York 14203

*Prepared at the Request of Counsel*

Dear Mr. Sutton:

**Re: Revision 5 - Remedial Work Plan for Spill Nos. 1207205 and 1311845  
Tonawanda Coke Corporation; 3875 River Road, Tonawanda, New York**

On August 9, 2013, Tonawanda Coke Corporation (TCC) submitted to the New York State Department of Environmental Conservation (NYSDEC) a remedial work plan prepared by Conestoga-Rovers & Associates (CRA) for the investigation and/or remediation of petroleum-impacted soil at the TCC facility in Tonawanda, New York (Site). The work plan was prepared pursuant to a Petroleum Spill Stipulation Agreement (Stipulation) that was entered into between TCC and NYSDEC, dated July 11, 2013, regarding certain historical spills at the Site that are collectively identified as Spill No. 1207205.

On October 4, 2013, NYSDEC provided comments to TCC on the remedial work plan. A conference call was subsequently held on October 23, 2013 between NYSDEC, Hodgson Russ LLP (Hodgson Russ), and CRA to further discuss the October 4 comments. Based on the discussions, a revised work plan (Revision 1) was submitted to NYSDEC dated October 31, 2014.

The NYSDEC provided comments to the revised work plan in a letter, dated January 16, 2014. On March 12, 2014, a meeting was held between representatives of NYSDEC and CRA (on behalf of TCC) to discuss the comments in the January 16, 2014 letter.

A revised remedial work plan (Revision 2) incorporating the written and verbal comments provided by NYSDEC on January 16, 2014, and March 12, 2014, respectively was submitted to NYSDEC on April 9, 2014.

On May 5, 2014, TCC signed an Order on Consent No. R9-20140324-12 (Order) to address petroleum contamination resulting from a spill (Spill No. 1311845) that occurred March 18, 2014. Schedule A of the Order requires that the remediation of Spill No. 1311845 be addressed in conjunction with the proposed methods outlined in this work plan for Spill No. 1207205. The revised Work Plan (Revision 3) incorporating actions to address Spill No. 1311845 was submitted to NYSDEC on May 19, 2014.

The NYSDEC requested additional clarifications on the Work Plan elements in a letter dated June 19, 2014. In response, Remedial Work Plan Revision 4 was submitted on May 29, 2015.

NYSDEC provided additional comments and a request for information in a June 29, 2015 letter. This submission (Remedial Work Plan Revision 5) has been made in response to that request, and to document the proposed final Remedial Work Plan.

## **1. Site Background**

Pursuant to an inspection conducted in November 2012, the NYSDEC issued a letter, dated February 15, 2013, to TCC through its counsel (Hodgson Russ), presenting a proposed Corrective Action Plan to address Spill No. 1207205. The inspection and ensuing request for an Investigation Work Plan were the result of a spill report associated with leaking equipment that was filed with NYSDEC in October 2012. CRA reviewed NYSDEC's proposed Corrective Action Plan, and conducted an inspection of the Site on March 12, 2013, focusing on the areas of concern that were noted in NYSDEC's February 15 letter.

A meeting was held on May 10, 2013 with representatives from NYSDEC Region 9, Hodgson Russ, and CRA to discuss the Site, NYSDEC and CRA's observations, and the need for investigation and corrective action of the specific areas of concern identified in the NYSDEC's February 15, 2013 letter. Further discussions were held between the NYSDEC and Hodgson Russ that ultimately resulted in agreement that in order to close the active spill report, TCC would proceed directly with remediation (excavation) of impacted soils in known areas where operations may have impacted soils.

On March 18, 2014, a spill of approximately 1 gallon of hydraulic oil occurred. Spill No. 1311845 was assigned to the spill. In accordance with the Order, the remediation of Spill No. 1311845 is being addressed in conjunction with Spill No. 1207205.

## **2. Objective**

The overall objective of this work plan is to address petroleum-impacted soils from the following target areas identified by the NYSDEC during the November 2012 Site visit:

1. Stained area outside of the containment structure for the light oil storage tank
2. Former Diesel fuel storage area
3. Former Loader storage/parking area
4. Round house/oil house
5. Coal Separating/Sorting area (Extec Location)
6. Railroad track

In addition, the area where Spill No. 1311845 occurred will be addressed as Target Area G.

## **3. Scope of Work**

Remedial actions will be conducted at the six areas identified in Section 2.0. The locations of these areas are shown on Figure 1. The activities to be conducted at each area are discussed below.

### **3.1 Former Light Oil Storage Tank Area (Area A)**

Impacted material will be excavated from adjacent to, and outside of, the north end of the Former Light Oil Storage Containment area. The initial footprint of the excavation will be marked out to remove the areas where stained soils are present and/or were previously identified in photographs. Figure 2 shows the approximate location of the excavation area. The excavation and confirmatory sampling will be completed in accordance with Sections 4.1 and 4.2 of this work plan.

### **3.2 Former Diesel Fuel Storage Area (Area B)**

Impacted material will be excavated from the Diesel Fuel Storage Area Containment, and from the fuel transfer area located adjacent to the northwest corner of the containment dike. The initial footprint of the excavation will be delineated to remove the areas where stained soils are present and/or were previously identified in photographs. Figure 3 shows the approximate location of the excavation area. The excavation and confirmatory sampling will be completed in accordance with Sections 4.1 and 4.2 of this work plan.

Note that on January 22, 2014, TCC permanently took the 16,500-gallon diesel tank at this location out of service. All of the diesel fuel that could be pumped was removed from the tank, and any remaining sediment and bottom sludge were also removed and properly disposed offsite. Diesel fueling operations have been relocated to an area located in the vicinity of the Former Light Oil Dispensing area that contains an impermeable surface in order to reduce the possibility of future discharges to the soil.

Due to concerns about the structural integrity of the out-of-service diesel tank during containment area soil excavation, the impacted soil removal in this area will be performed after the diesel tank has been removed. The removal of the 16,500-gallon diesel tank is currently scheduled for completion in August 2015.

### **3.3 Former Loader Storage/Parking Area (Area C)**

Petroleum-impacted material has been removed from the Former Loader Storage/Parking Area, and this area is no longer used for loader storage and parking. To confirm that all impacts have been removed, confirmatory shallow test pits will be excavated in Area C. Because the parking/storage occurred over a relatively long area (see Figure 1), three approximately 50-foot-long shallow test pits will be performed equidistant apart along the length of the area where loader storage and parking occurred. The test pits will be the width of the bucket and advanced just into the native soil. As it is removed, the excavated material will be examined. If visual and olfactory observations of test pit material indicate that the impacts have been removed and photoionization detector (PID) readings are less than 25 ppm, no further excavation or sampling will be required and the excavated material will be returned to the area. Otherwise, impacted material will be removed and handled in accordance with Section 4.3. If impacted material is encountered, test pit excavation will continue until all impacted material has been removed.

### **3.4 Round House/Oil House (Area D)**

Areas of petroleum impacted material were identified during the NYSDEC Site visit in November 2012. Impacted material will be excavated from these areas. The initial footprint of the excavation(s) will be

delineated to remove the areas where stained soils are present, were previously identified in photographs, and based on discussions with TCC personnel familiar with Area D historic operations. Figure 4 shows the approximate location and potential size of the area impacted by petroleum releases. The excavation(s) and confirmatory sampling will be completed in accordance with Sections 4.1 and 4.2 of this Work Plan

### **3.5 Coal Separating/Sorting Area (Extec Location – Area E)**

A mobile screening station commonly referred to as the Extec developed a leak in the Coal Separating/Sorting area. The leak was due to a damaged hydraulic line coming from one of the pumps in the engine compartment, as well as a loose fitting on the hydraulic motor for the engine belt. This resulted in a small amount of material (estimated at 1 to 2 gallons) leaking onto the coke breeze base material below the Extec machine. The equipment was repaired within several hours of the leak detection, and initially, all visually-impacted coke breeze material (which is estimated to be approximately 200 pounds of material) was removed, transferred to the mixing pad, and reintroduced into the coke manufacturing process. An additional 400 cubic feet of coke breeze was excavated, with approximately 100 cubic feet coming from below the area of the leak.

To confirm that all impacts have been removed, confirmatory samples will be collected at three locations. Direct push sampling techniques will be used to retrieve samples of breeze and soil material. Sample locations will be determined in the field based on photographs and discussions with TCC personnel familiar with Area E historic operations. The sample core will be advanced 1 foot into native soil. One composite sample will be generated at each location from the coke breeze and/or fill material present in the core sample and one native soil sample will be generated from the top 1 foot of soil. The confirmatory samples will be analyzed in accordance with Section 4.2 of this work plan.

### **3.6 Railroad Track (Area F)**

During the November 2012 site visit, visual observations were made of surficial staining on the railroad track. As the railroad track is active, and used on a routine basis, removal of visually impacted ballast, and potentially impacted underlying soil, is not a feasible means of addressing potential impact. Instead, TCC proposes to actively remediate the visually stained surface of the track through the application of a hydrocarbon mitigation agent, such as BioSolve. This is consistent with how railroad operations address potential contamination concerns on active rail lines.

The agent will be sprayed directly onto stained ballast as an in-situ remediation technique, in accordance with the manufacturer's directions. No pre-remediation sampling is proposed, as all of the visually impacted track area will be treated. After a specified period of time as directed by the manufacturer's instructions, if the application of additional mitigation agent is necessary, it will be applied per the manufacturer's direction. No confirmatory sampling is proposed for this area because there is no feasible alternative other than repeated application of the mitigation agent.

### **3.7 Spill No. 1311845 (Area G)**

On March 18, 2014, a hole was observed in a hydraulic oil line on a man lift. An estimated 1 gallon of hydraulic oil was observed on the ground beneath the line. Approximately 5 tons (one end loader

bucket) of visually-impacted coke breeze/coal material was removed from the area and transferred to the concrete coal field mixing pad.

To confirm that all impacts have been removed, confirmatory samples will be collected at three locations. Direct push sampling techniques will be used to retrieve samples of breeze and soil material. Sample locations will be determined in the field based on photographs and discussions with TCC personnel familiar with the Area G spill. The sample core will be advanced 1 foot into native soil. One composite sample will be generated at each location from the coke breeze and/or fill material present in the core sample and one native soil sample will be generated from the top 1 foot of soil. The confirmatory samples will be analyzed in accordance with Section 4.2 of this work plan.

### **3.8 Background Sampling**

Native soil samples will be collected from five locations in non-manufacturing locations at the Site, as shown on Figure 5. Direct push sampling techniques will be used to retrieve a 2-foot core of native soil at each location, and one composite sample will be generated at each location from the 2-foot sample. The soil samples will be analyzed in accordance with Section 4.2 of this Work Plan.

The data from the background sampling will not be compared to soil cleanup criteria or other regulatory guidance. The background data will be used as a guide of the expected background levels at the Site when comparing the results of the confirmatory samples to soil cleanup levels, as discussed in Section 4.2 of this Work Plan.

## **4. Field Methodology**

### **4.1 Excavation Plan**

Excavation of impacted material and, if necessary, of native soil, will be conducted at Areas A, B, and D. The excavation work will be followed by confirmatory soil sampling as discussed in Section 4.2. Potentially impacted soil will also be removed from Area C during confirmatory test pit work. If necessary, based on the sampling described in Sections 3.5 and 3.7, excavation and/or other response actions (if feasible) will also be conducted at Areas E and G. Area F will separately be addressed through in-situ remediation.

The general areas to be excavated and/or sampled are shown on Figure 1. The exact final locations will be determined in the field based on the NYSDEC November 2012 Site inspection photographs and discussions with TCC personnel familiar with historic operations in the area, whether surficial staining is evident or not. Once the locations have been delineated, they will be confirmed with NYSDEC.

Excavation will continue vertically and horizontally into the breeze or native soil until visual and olfactory observations indicate that the impacts have been removed and photoionization detector (PID) readings are less than 25 ppm. At that time, confirmatory sampling will be conducted in the manner discussed in Section 4.2.

Excavation and confirmatory sampling will be performed per the above unless historic conditions other than petroleum releases are encountered, in which case excavation will cease and conditions reassessed.

## 4.2 Confirmatory Sampling

### 4.2.1 Initial Confirmatory Sampling

For the initial confirmatory sampling at Areas E and G, one composite sample will be generated at each location from the coke breeze and/or fill material present in the core sample. In addition, one native soil sample will be generated from the top 1 foot of soil.

**Table 4.1 Summary of Initial Confirmation Samples to be Collected**

Area	Coke Breeze/Fill Material	Soil
Area E Coal Separating/Sorting Area	3	3
Area G Spill No. 1311845	3	3
Background Samples	0	5

### 4.2.2 Excavation Confirmatory Sampling

Once the extent of impacted soil has been reached based on visual and olfactory observations and PID readings, confirmatory soil samples will be collected for laboratory analysis. Confirmatory soil samples will be collected from each individual excavation in accordance with DER-10. For excavations less than 20 feet in perimeter, one soil sample from the bottom and one sidewall soil sample will be collected. The sidewall sample will be collected from the sidewall in the direction of surface runoff (e.g., if surface topography indicates runoff to the north, the north wall of the excavation will be sampled).

For excavations larger than 20 feet in perimeter, one sample will be taken from each sidewall for every 30 linear feet of wall, and one sample from the excavation bottom for every 900 square feet of bottom. A site-specific sampling plan will be developed if it is envisioned that any one excavation would be greater than 300 feet in perimeter (greater than ~5,000 square feet). An excavation area of this magnitude is not currently contemplated based on the area to be remediated.

Samples consisting of coke breeze and/or fill material will be analyzed for NYSDEC Spills Technology and Remediation Series (STARS) Memo # 1 list of volatile organic compounds (VOCs) by USEPA Method 8260. Samples consisting of native soil material will be analyzed for the STARS list of VOCs, as well as the STARS list of semi-volatile organic compounds (SVOCs) by USEPA Method 8270. Coke breeze and/or fill material samples will not be analyzed for SVOCs due to the potential for false positives in the results from the presence of coal dust and coal breeze at the Site.

This matter is governed by the New York State Navigation Law, and will include reference to NYSDEC Policy CP-51/Soil Cleanup Guidance (CP-51) regarding petroleum spill response. Analytical results will be compared to CP-51 Table 3. The comparison of results to soil cleanup levels will be made while giving due consideration to the Site-specific background samples taken by TCC to assess the

extent to which it is feasible to reach the applicable soil cleanup levels or other appropriate levels, as allowed by CP-51.

#### **4.3 Excavated Soil Handling**

Visually clean excavated material (native soils) with PID readings less than 25 ppm will be placed in a non-impacted soil stockpile for later use as backfill of the excavation. Uncontaminated coke breeze that is excavated will be segregated pending further discussion between TCC and NYSDEC as to allowable uses for uncontaminated coke breeze material.

Excavated material with visual and olfactory evidence of impacts with PID readings greater than 25 ppm will be addressed in one of two manners:

- Excavated material consisting of petroleum-impacted coke breeze will be transported directly to TCC's concrete mixing pad (located in the coal field area) for staged recycling into the Site's operations. Beneficial Use Determination (BUD) #1106-9-15 approving the use of the impacted material in this manner was granted by NYSDEC on July 2, 2014.
- Excavated material consisting of native clay, soil, and/or debris will be placed in a separate stockpile on plastic sheeting. Once all materials have been excavated, and completion of the remediation is confirmed, the materials will be sampled for waste characterization (total VOCs, SVOCs, RCRA metals, and PCBs). The material will be properly disposed within 15 days of receipt of analytical data. The edges of the plastic sheeting will be elevated to contain water, and will be provided an anchored tarp to avoid stormwater runoff of potentially affected material. The piles will be inspected at minimum once each week, and after every storm event. Any damaged tarp covers will be promptly addressed.

The segregated coke breeze and clay/soil/debris materials will be available for NYSDEC inspection, should NYSDEC request it.

#### **4.4 Fluids Management**

TCC maintains an Industrial User permit with the Town of Tonawanda POTW. Although not anticipated, if any excavations require dewatering, the water will be containerized and treated in TCC's wastewater treatment system prior to discharge to the POTW under its active permit.

#### **4.5 Backfilling**

Where additional backfill is needed to restore the excavated areas to original surface elevations, TCC will utilize backfill material consistent with that described in DER-10. The material will be sufficiently compacted to support anticipated loads.

### **5. Reporting**

Once the data is received for the sampling conducted at Areas E and G and for the background sampling, a brief letter report will be prepared and submitted to NYSDEC. The letter report will present the sampling data, with a comparison to the soil cleanup levels in CP-51 Table 3, as well as

Site-specific background levels. The need for additional excavation and/or other response actions at Areas E, and G will be evaluated based on the results.

Upon completion of the remedial work plan, a cumulative report will be submitted to NYSDEC detailing the sampling and excavation activities, and providing a summary of analytical results compared to the CP-51 Table 3 soil cleanup levels, as well as Site-specific background data.

TCC will periodically apprise NYSDEC of the status of the implementation of the remedial work plan.

## **6. Implementation Schedule**

Within 3 weeks of receiving NYSDEC's approval to proceed, TCC will begin a staged implementation of this work plan. Sample collection in Areas E and G, and the background sampling will be completed first. Once the data is received, a brief letter report will be prepared and submitted to NYSDEC in the manner discussed in Section 5 above. If, based on the sampling results, excavation is warranted at one or more of the areas sampled, the excavation(s) will be completed based on a schedule to be developed at that time, and subsequently submitted to NYSDEC. While the analyses of data from Areas E and G are pending, the excavation and confirmatory sampling at Area A will be performed, followed by the test pit work at Area C, excavation work at Areas B and D, and the in-situ remediation at the railroad tracks. Due to concerns about the structural integrity of the out-of-service diesel tank during containment area soil excavation in Area B, the impacted soil removal in this area will be performed after the diesel tank has been removed, of which NYSDEC will be informed.

A proposed project schedule is provided as Attachment 1. The proposed schedule may be affected by certain variables, including the scope of the excavations (amount of material that may need to be excavated), weather considerations, and NYSDEC approval of certain aspects of the ongoing remediation project. TCC will keep NYSDEC apprised of timing issues throughout the process.

If you have any questions regarding this work plan, please contact the undersigned.

Yours truly,

GHD



Robert G. Adams, P.E.  
Project Manager

RGA/ck/4

Attachment

c.c.: R. Kennedy, Esq.  
M. Hecker, Esq.  
T. Mucha - NYSDEC



## Figures

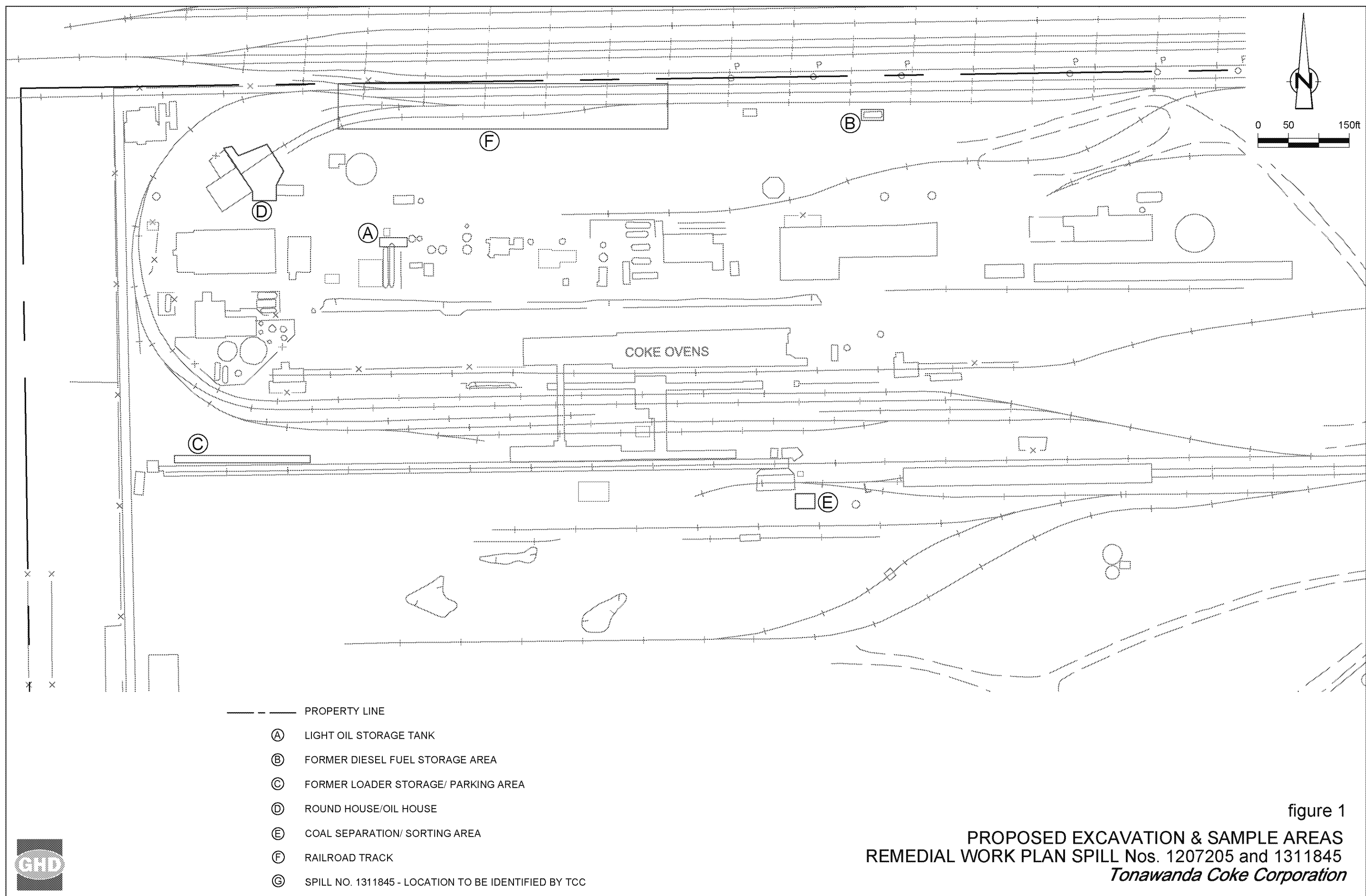




figure 2

APPROXIMATE LOCATION OF TARGET AREA A  
REMEDIAL WORK PLAN SPILL Nos. 1207205 and 1311845  
*Tonawanda Coke Corporation*





APPROXIMATE LOCATION OF  
TARGET AREA B

figure 3

APPROXIMATE LOCATION OF TARGET AREA B  
REMEDIAL WORK PLAN SPILL Nos. 1207205 and 1311845  
*Tonawanda Coke Corporation*





figure 4

APPROXIMATE LOCATION OF TARGET AREA D  
REMEDIAL WORK PLAN SPILL Nos. 1207205 and 1311845  
*Tonawanda Coke Corporation*



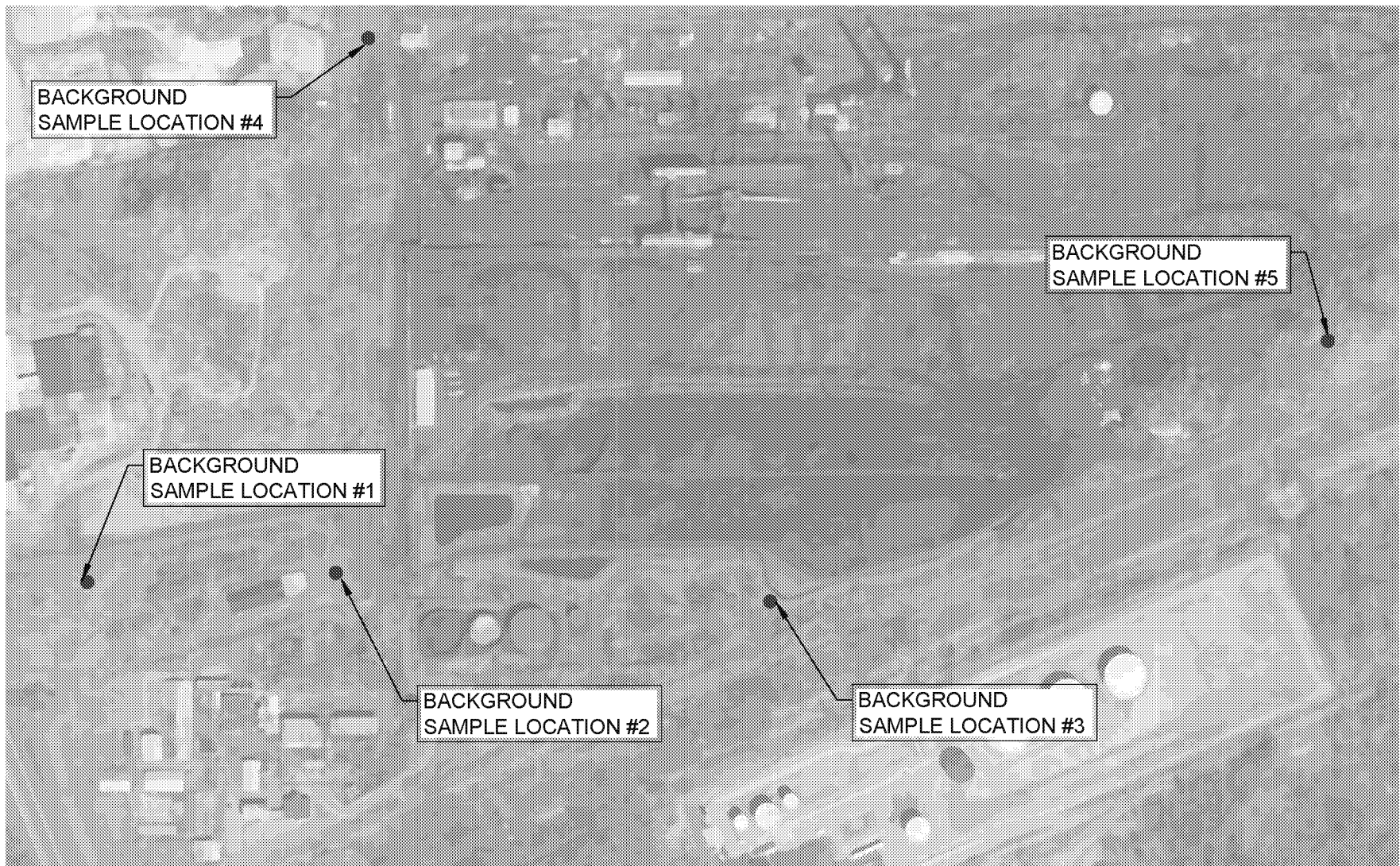


figure 5

PROPOSED BACKGROUND SAMPLE LOCATIONS  
REMEDIAL WORK PLAN SPILL Nos. 1207205 and 1311845  
*Tonawanda Coke Corporation*

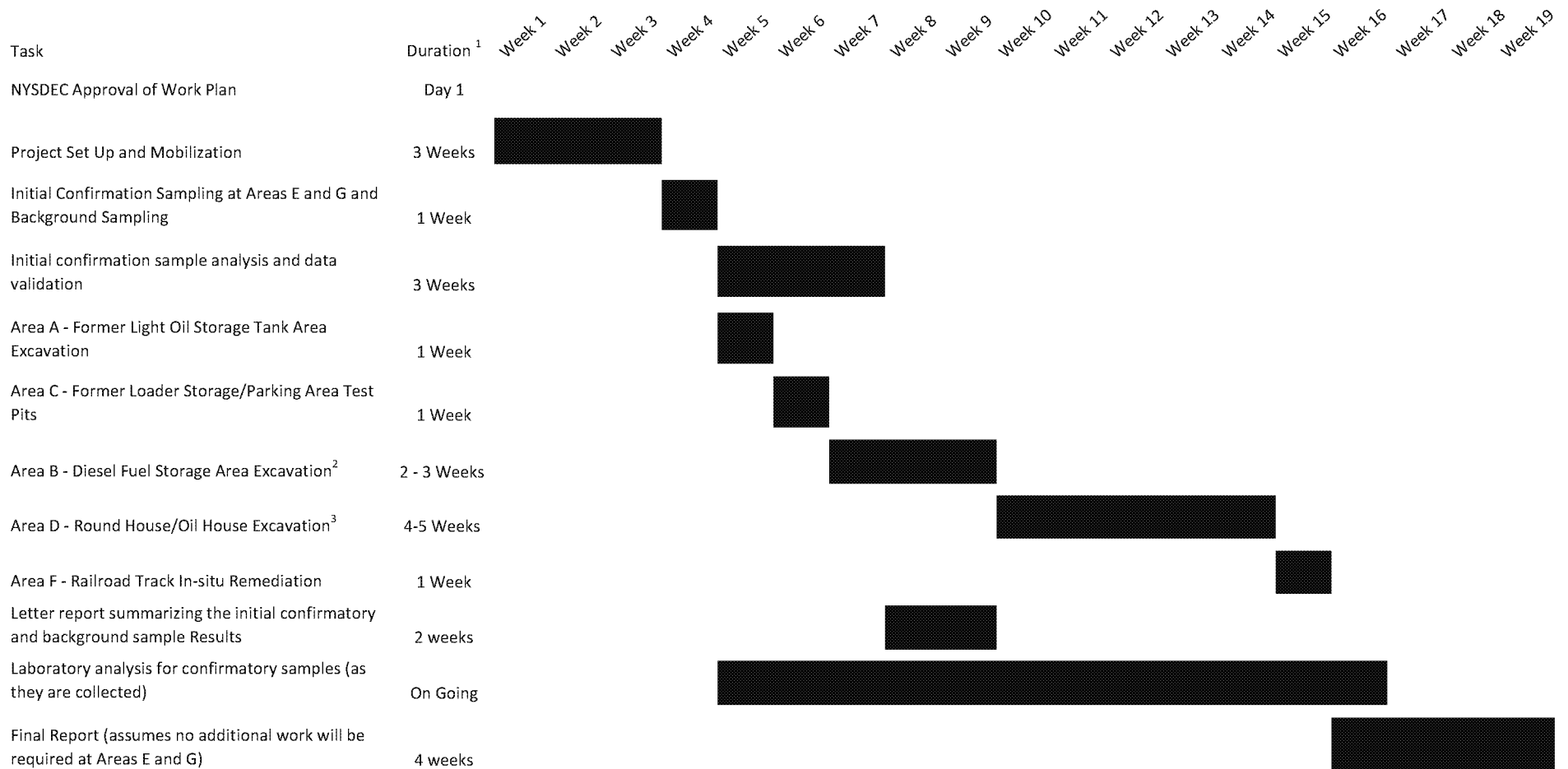


NOT TO SCALE

# **Attachment 1**

## **Proposed Project Schedule**

ATTACHMENT 1  
PROPOSED PROJECT SCHEDULE  
REMEDIAL WORK PLAN FOR SPILL Nos. 1207205 and 1311845  
TONAWANDA COKE CORPORATION  
TONAWANDA, NEW YORK



- Notes:**
- (1) This schedule has been developed based on estimates associated with Site conditions. Other variables, including the scope of the excavations, weather considerations, and NYSDEC approval of certain aspects of the ongoing remediation project, may result in adjustments to the schedule. TCC will keep NYSDEC apprised of timing issues throughout the process.
- (2) Initially, the excavation activities will be completed on the outside of the containment dike. Work inside the containment area will be completed once the closed storage tank is removed.
- (3) Restoration of Area 4 - Round House/Oil House - will include installation of an impervious surface upon completion of the remediation, and confirmation from NYSDEC that no further work is required at this location. The timing will be dependent upon the availability of batch plants and weather considerations.